

## **REMARKS/ARGUMENTS**

### **1. Claim Amendments**

The Applicant has amended claims 1-6, 8, 13-15, 17-18 and 23-25; and claims 7, 9-12, 16, 19-22, 32, 34-37, 41 and 44-47 have been canceled. Applicant respectfully submits no new matter has been added. Accordingly, claims 1-6, 8, 13-15, 17-18, 23-25-31, 33, 38-40, 42-43 and 48-50 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

### **2. Claim Rejections – 35 U.S.C. § 101**

Claims 1-25 are rejected under 35 U.S.C. § 101 because the claims do not fall within one of the four statutory categories of invention. Claims 1-6, 8, 13-15, 17-18 and 23-25 have been amended to direct them to statutory subject matter.

### **3. Claim Rejections – 35 U.S.C. § 103 (a)**

Claims 1, 23, 26 and 48 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,236,862 (Erten et al.) in view of U.S. Patent Application Publication Number 2004/0103435 (Yi et al.). Applicant respectfully traverses the rejection.

Regarding claim 1, 23, 26 and 48, the Examiner states that Erten teaches a continuously adaptive dynamic signal separation and recovery system whereby two mixed signals which originate from two different sources are separated [Column 9, lines 1-13].

In response, Applicant states that the present invention does not process mixed signals. Claim 1 states that the present invention processes: ...communications of traffic with different characteristics wherein traffic from at least two information sources is divided into two or more categories including a first and a second category for transfer with different characteristics, the method comprising transmitting the traffic for the transfer with different characteristics on physically wholly or partially separated channels... (e.g., voice and data signals). Hence, from the start, Erten is not applicable to the present invention. Erten discloses a method and apparatus for dynamically

separating and recovering original signal sources by processing a set of mixed received mixtures and convolution of signals utilizing differential equations and a computer. The system enables the blind separation and recovery of an unknown number of signals mixed together in dynamically changing interference environments with very minimal assumption on the original signals.

Hence, if Erten discusses mixed signals, and Yi, as the Examiner states below, discloses non-mixed signals with different characteristics, then necessarily they are not properly combinable, nor are they suggestive of the present invention. Hence it is apparent that the Examiner has impermissibly used hindsight by reading back into the prior art the teachings of Applicant's own disclosure. The Examiner has used Applicants' claims as a blueprint to pick and chose elements from the prior art similar to Applicants' individual claim limitations, without regard to the manner in which those limitations have been combined by Applicant to effect a novel and useful improvement to the state of the art. Various bits of data or teachings of the prior art are not properly combined unless there is something in the prior art itself that suggests that those teachings could or should be combined. Both the suggestion for combining teachings to make the invention and its reasonable likelihood of success "must be founded in the prior art, not in the applicant's disclosure." *In re Dow Chem.* 837 F.2d 469, 473 (Fed. Cir. 1988).

The Examiner continues:

Furthermore, Erten teaches a dynamic signal separation algorithm used in each cell tower and each mobile receiver with the ability to distinguish and adaptively reject multipath signals, crosstalk and interference of signals that occupy overlapping spectra [Column 18, lines 15-19]. But Erten does not specifically teach transmitting the traffic with different characteristics on physically wholly or partially separated channels. Yi teaches a method and radio equipment of communications of traffic with different characteristics [Figure 1, Page 2, paragraph 00132] wherein, the method comprising transmitting the traffic with different characteristics on physically wholly or partially separated channels [page 4, paragraph 0085].

The Examiner states, thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the method of Yi in the signal separation system of Erten in order to adaptively recover original signals sharing the same channel. Note Applicants comments above with respect to the improper combination of Erten with Yi, as well as Applicant's comments below. It would not have been obvious to combine, because the references, based on the operation of Erten, teach away from the present invention.

Yi discloses a method for transmitting a control signal for multimedia service data of UMTS (Universal Mobile Telecommunications System) includes MBMS service data that can be transmitted in a wireless system providing various types of MBMS service. In Yi, an MBMS scheduling block including an MBMS service identifier list and scheduling information of MBMS RB set information and an MBMS service information block including one MBMS service identifier and MBMS RB set information for a corresponding service are transmitted to a terminal group. Page 4, paragraph 85 of Yi provides:

[0085] To achieve at least these advantages in whole or in parts, there is further provided a control signal transmission method in a wireless communication system providing a multimedia broadcast/multicast service (MBMS) to a terminal group including plural terminals, including: constructing MBMS scheduling block (MSB) by services; constructing an MBMS service information block (MSIB); and transmitting the MSB and the MSIB to a terminal group through different logical channels.

However, Yi appears directed to a method and apparatus that processes signals on different logical channels, while the present invention is directed to methods and apparatus that process signals on different physical channels. Claim 1 states that the present invention processes: ...communications of traffic with different characteristics wherein traffic from at least two information sources is divided into two or more categories including a first and a second category for transfer with different characteristics, the method comprising transmitting the traffic for the transfer with different characteristics on physically wholly or partially separated channels...

More specifically, Yi discusses separation of different types of traffic (data and control) while the present invention is directed to separation of data transmissions that are transmitted with different transmission techniques (power controlled transmission, transmission utilizing link adaptation; etc.) Hence, in the present invention, different transmission techniques can be applied because the different types of data have different characteristics and requirements, the key differentiator of the present invention being the different transmission techniques. From this perspective, Yi is not applicable to the present invention.

Claims 7, 9-12, 32 and 34-37 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Erten in view of Yi and further in view of U.S. Patent Application Publication Number 2004/0095903 (Ryan et al.) Claims 7, 9-12, 32 and 34-37 have been canceled rendering the rejection of these claims moot.

Claims 4, 5, 17-22, 24, 29, 30, 42-47 and 49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Erten in view of Yi and further in view of U.S. Patent Number 6,064,662 (Gitlin et al.). Claims 19-22 and 44-47 have been canceled rendering the rejection moot with respect to those claims. With respect to claims 4-5, 17-18, 24, 29-30, 42-43 and 49, Applicant respectfully traverses the rejection as claims 4-5, 17-18, and 24 depend from independent claim 1 and claims 29-30, 42-43 and 49 depend from independent claim 26, and each set of claims recite further limitations in combination with the novel elements of claims 1 and 26, respectively. Therefore, the allowance of claims 4-5, 17-18, 24, 29-30, 42-43 and 49 is respectfully requested.

Claims 2 and 27 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Erten in view of Yi and further in view of U.S. Patent Application Publication Number 2006/0111148 (Mukkavili et al.). Applicant respectfully traverses the rejection as claim 2 depends from independent claim 1 and claim 27 depends from independent claim 26, and each of claims 2 and 27 recite further limitations in combination with the novel elements of claims 1 and 26, respectively. Therefore, the allowance of claims 2 and 27 is respectfully requested.

Claims 3 and 28 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Erten in view of Yi and further in view of Mukkavili, and further in view of Gitlin.

Applicant respectfully traverses the rejection as claim 3 depends from independent claim 1 and claim 28 depends from independent claim 26, and each of claims 3 and 28 recite further limitations in combination with the novel elements of claims 1 and 26, respectively. Therefore, the allowance of claims 3 and 28 is respectfully requested.

Claims 6 and 31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Erten in view of Yi and further in view of U.S. Patent Number 7,164,649 (Walton et al.) Applicant respectfully traverses the rejection as claim 6 depends from independent claim 1 and claim 31 depends from independent claim 26, and each of claims 6 and 31 recite further limitations in combination with the novel elements of claims 1 and 26, respectively. Therefore, the allowance of claims 6 and 31 is respectfully requested.

Claims 8 and 33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Erten in view of Yi and further in view of U.S. Patent Number 5,751,704 (Kostic et al.) and further in view of U.S. Patent Number 7,099,629 (Bender). Applicant respectfully traverses the rejection as claim 8 depends from independent claim 1 and claim 33 depends from independent claim 26, and each of claims 8 and 33 recite further limitations in combination with the novel elements of claims 1 and 26, respectively. Therefore, the allowance of claims 8 and 33 is respectfully requested.

Claims 15, 16, 40 and 41 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Erten in view of Yi and further in view of Bender and further in view of Gitlin. Claims 16 and 41 have been canceled, rendering the rejection of those claims moot. With respect to claims 15 and 40, Applicant respectfully traverses the rejection as claim 15 depends from independent claim 1 and claim 40 depends from independent claim 26, and each of claims 15 and 40 recite further limitations in combination with the novel elements of claim 1 and 26, respectively. Therefore, the allowance of claims 15 and 40 is respectfully requested.

Claims 50 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Erten in view of Yi and further in view of U.S. Patent Application Publication Number 2002/0193133 (Shibutani et al.). Applicant respectfully traverses the rejection as claim 50 depends from independent claim 26, and recites further limitations in combination

with the novel elements of claim 26. Therefore, the allowance of claim 50 is respectfully requested.

#### **4. Prior Art Not Relied Upon**

In paragraph 23 on page 10 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicant's disclosure. None of the cited references, alone or in combination, disclose or are suggestive of the present invention as claimed.

#### **CONCLUSION**

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

  
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